

Roadway Drainage

April 26, 2004 (#622)

WSDOT Eastern Region Hdq., 2714 N. Mayfair Street,
Spokane, WA 99207 (509) 324-6000

May 4, 2004 (#623)

Ellensburg (Class Cancelled)

May 6, 2004 (#624)
Location moved to:

Marysville Fire Station #62, 10701 Shoultes Road,
Marysville, WA 98270 (360) 659-2777

May 12, 2004 (#625)

LaQuinta Inn, 1425 East 27th St., Tacoma, WA 98421
(253) 383-0146

(The phone numbers shown above are for your information and should be used only for making room reservations or in case of emergency to contact a student in the class.)

Cost: \$45

Time: 8:30 a.m. to 4:00 p.m.

Class Size: 35

Instructor: Bill Heiden

Target Audience: This workshop is for anyone who works with rural roads and has responsibility for maintenance and/or construction of roadways. Maintenance operators and supervisors of city, county, tribal, state, utility districts, contractors, state and forest service roads, BLM, and other agencies will expand their knowledge about roadway drainage.

Course Description: This one-day workshop will discuss appropriate methods to use in determining proper size of ditches and pipes as well as the proper method of constructing and maintaining each.

Subjects to be addressed:

- Basic Road Design Characteristics
- Basic Soil Characteristics
- Basic Hydrology
 - Drainage Areas
 - Runoff Factors
 - Rainfall Intensity
- Hydraulics
 - Culvert Materials
 - Sizing Culvert
 - Sizing Ditches
- Placement of Culverts
- Culvert End Treatments
- Culvert and Ditch Maintenance



Students will receive a course manual “Roadway and Roadside Drainage” by David P. Orr, from the Cornell Local Roads Program, Ithaca, New York.

Instructor: Bill Heiden is a professional engineer and retired land surveyor. He has a background of over 40 years experience as a county road engineer and contractor working in the construction and maintenance of roads in Larimer and Gilpin Counties in Colorado. Since 1999 he has consulted and lectured in New Mexico, Arizona, South Dakota, Texas, Utah, Oklahoma, Indiana, Idaho, Oregon, Alaska, Wyoming, as well as in Washington State and British Columbia. Mr. Heiden is recognized throughout the United States for his expertise on drainage and gravel roads. In addition, he has a wealth of knowledge on practical business measures that can help cut costs for your agency. Many T2 customers have found his previous course, “Basics of a Good Gravel Road,” to be extremely valuable.

Questions? Contact Laurel Gray at (360) 705-7355 or GrayL@wsdot.wa.gov

Registration:

Please register on-line using this link: [On-line Registration Form](#) Fill in your information, select your class from the list, then press “Submit.” A registration notice is e-mailed to you when we process your request. **If you do not receive this e-mail notification within a few days, you are not registered and should contact us by phone.**

Please do not prepay, an invoice will be mailed after the class. Confirmation letters are mailed three weeks prior to the class and will have driving directions to the training site. If you are unable to attend, someone else from your agency may attend in your place. To cancel your registration, or for assistance with registration, e-mail wst2center@wsdot.wa.gov or schmidw@wsdot.wa.gov , or phone (360) 705-7386.

- A “unique identifier” is now required when registering on-line. You might use the last four digits of your social security number, your mother’s maiden name, a child or pet name, or your birth date, but please make it something you will remember. We will use your name and this identifier to automatically and quickly register you into a class.

(Disability accommodations provided upon request.)

Washington State Technology Transfer’s Web Page: www.wsdot.wa.gov/TA/T2Center/t2hp.htm